

Remarks

Re-examination of the above-identified application is respectfully requested.

Claim 1 has been amended to require manganese in the range of 2 to 6.5%. Support for this limitation can be found in Figure 9b. Claim 22 has been amended to require less than 15% weight cobalt and to correct a typographical error in the weight percent of iron. Support for the amendment concerning cobalt can be found in claim 13. Claim 23 has been added to require greater than 10% nickel. Support for this amendment can be found in the specification at page 21, line 17.

Claims 1-6 and 16-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Way. The Examiner states that the reference teaches an alloy with constituents having weight percent ranges overlapping those recited by the claims. The Examiner alleges that such overlap renders Applicant's composition prima facie obviousness. The Examiner specifically references claim 1 of Way. In addition, the Examiner relies on the specific examples of the Way specification to show manganese in the range of 0.06 to 1.07%. Applicant respectfully traverses.

Applicant's amended claim 1 requires between 2.0 and 6.5% manganese. At best Way teaches a range of .06 to 1.7% by weight manganese through a review of all examples contained therein. Since, manganese is not even mentioned by Way at any other point of the disclosure, there is no overlap with the presently claimed invention. Furthermore, there is no suggestion to modify Way to include a greater quantity of manganese. This is particularly true because the only teaching to include manganese is from an examination of the detailed examples. Moreover, manganese is not even mentioned as a constituent of the composition at any other location in the entire disclosure. Accordingly, withdrawal of the rejection of claims 1-6, 16-21 and 23 is respectfully requested.

Applicant has also amended claim 22 to require less than 15% by weight cobalt. Importantly, Way teaches an extraordinarily broad cobalt range of 5 to 65%. To discern a teaching from this range, the skilled artisan would refer to each of the Way examples wherein the lowest cobalt percentage disclosed is 48.95% by weight (see Example 7); Example 11 diverging from the

Way invention by lacking chromium. Accordingly, there is clearly a teaching away in Way from the presently claimed range which rebuts the presumption articulated by the Examiner based on In re Malagari. Therefore, withdrawal of the rejection is respectfully requested.

Applicants also note that Way teaches a nickel range of 2 to 20% but provides only examples at below 10.2%. Accordingly, Applicant's new claim 23 distinguishes over Way by requiring a higher nickel content than is taught to the skilled artisan.

To further buttress Applicant's position concerning the non-obviousness of the present invention, and demonstrate that the present ranges provide unexpected properties in an alloy which are not suggested by the extraordinarily broad ranges of Way, Applicant submits herewith a Declaration of Dr. Richard S. Henderson. Applicant notes that this Declaration concludes that Applicant's claimed nickel range in excess of 10% is important because the lower quantities taught by Way would fail to provide adequate toughness and corrosion/oxidation resistance in molten zinc or aluminum environments. Importantly, since Way is directed to piercing tools, there is no suggestion to modify the composition therein to achieve molten aluminum/zinc resistance. In fact, there is not even a reason to consider this issue.

Similarly, the Declaration states that a manganese level of at least about 2% is important relative to the maximum 1.07% manganese disclosed in Way because the solubility of the alloy in molten zinc is decreased at this level. Such a result is not even contemplated by Way.

Finally, the Declaration states that having a cobalt percentage of less than about 15% is important because of cost and the ability to form a matrix solution which contains carbides resistant to molten aluminum and zinc. Again, this is not even contemplated by Way.

While the Examiner has suggested that the claimed environment of use does not distinguish the present invention from Way, the characteristics of the claimed alloy in a particular environment is important in an obvious assessment. Moreover, since Way does not even contemplate the use of his alloy in molten zinc/aluminum, there can be no suggestion of the present non-overlapping and/or narrower ranges claimed by Applicant. More particularly,

the skilled artisan finds no suggestion in Way that the presently claimed novel alloy has unexpected superiority in a molten aluminum/zinc environment.

Finally, with regard to the Examiner's rejection of claims 1-6 and 16-22 as conflicting with claim 49 of Application No. 08/909,117, Applicant submits that claims having specific ranges for constituents such as vanadium, niobium, cobalt, boron and manganese cannot be deemed conflicting. Specifically, with reference to MPEP Section 822, the present applications are not within the categories articulated therein. More specifically, there is no conflicting subject matter between different inventors having common ownership; there is no rejection of one claim based on another in the same application; there is no double patenting rejection which is appropriate; one of the applications is not an interference; there is not a species genus relationship in the separate applications. In this regard, Applicant submits that only a obviousness type double patenting rejection may be appropriate. However, this rejection should be provisional until one of the applications is issued as a patent. Accordingly, withdrawal of the rejection is respectfully requested.

In view of the above, Applicant submits that this application is in condition for allowance and such action is respectfully requested.

If any fee is due in conjunction with the filing of this response, Applicant authorizes deduction of that fee from Deposit Account 06-0308.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this AMENDMENT is being deposited with the United States Postal Service as first class mail in envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on this March 19, 1999.



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